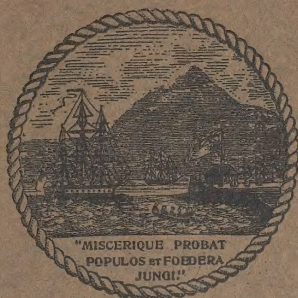


DEPARTMENT OF AGRICULTURE,
TRINIDAD AND TOBAGO.



OUR LOCAL FOODS.
Their Production and Use.

BY

W. G. FREEMAN, B.Sc., A.R.C.S., F.L.S.,
Acting Director of Agriculture,

AND

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Curator, Royal Botanic Gardens and St. Clair Experiment Station.

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OUR LOCAL FOODS

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"FOOD WILL WIN THE WAR. DON'T WASTE IT."

In these few words, used as a "post-mark" on letters, the United States Government emphasizes the present importance of the question of food supply. The Allies have a limited amount of food and a limited number of ships. In the United Kingdom, in France, Belgium, etc. our countrymen and our Allies are suffering privations of which we fortunately have had as yet no experience. Even in the United States wheatless days are enforced to allow more flour being exported to Europe. The necessities of war have already seriously reduced the number of ships which come to the Colony, and may diminish the number still further.

Even therefore if under the new licensing system the United States and Canada are able to spare us as much flour, etc., as we have received in the past, it is not certain that ships will be available to transport it.

It is the duty of every man and woman in the Colony to do the utmost in their power to economize in the use of imported articles, particularly flour, and to increase the production of local foodstuffs.

It is hoped that these notes will help both these objects being attained. They contain hints on the cultivation of the more important local food crops, and information on their use.

THE FOODS WE REQUIRE.

In order to keep the human body healthy and efficient it must be provided with regular supplies of suitable food. The foods ordinarily used may be divided into two chief groups:

- (a.) Those containing starch, sugar, fat and oils, (*i.e.* carbohydrates).
- (b.) Meat, beans, and peas, (*i.e.* nitrogenous).

The first group contains the substances which provide the energy which is used up in work, including vital activities, or particularly in cold countries in maintaining the heat of the body whence they are often spoken of as "heat producers." They may be likened to the fuel of an engine. Speaking generally the more work done the more of them is necessary. Hard work makes a man hungry, because he uses up a large amount of food substance which must be replaced to enable him to continue working, just as the engine must be continually stoked.

The second group includes the nitrogenous foods or so-called "flesh-formers." They are also essential in keeping the body fit. A smaller amount of these foods is however required.



The Reformatory during 1917 bought most of its vegetables, but arrangements have been made to take over an area of land where it is hoped to grow a large part of the vegetables required; this should result in a further saving in cost.

The authorities of the Reformatory find that cassava farine forms an excellent article of food, and have now in working order a plant, made on the premises, capable of grinding 2,000lb. of cassava per week and of extracting the by-products of starch and farine.

It was pointed out that by using sweet potatoes instead of bread, a saving of \$4.00 was effected on the previous total cost of \$6.90 for one meal alone.

WHAT TO DO IN 1918.

As soon as the weather permits, there must be a large production of quick maturing crops, corn, sweet potatoes, beans and peas, and repeated plantings of these at every possible opportunity to maintain a supply throughout the year. The more slowly maturing crops must also be more largely planted—yams, tannias, dasheen, rice, cassava, bananas, pigeon peas, etc.

For planting instructions see pp. 4 to 10.

When grown all these crops must be used to the fullest extent in place of imported articles.

The local supplies of coconuts should be used much more largely to replace imported butter, oleomargarine, oils, etc., for table and cooking purposes. Cocoa and chocolate are of very high food value and much more use should be made of the large supplies available.

Pigs, rabbits and goats are all animals which thrive and produce meat without requiring food materials which may be more profitably used in other ways. They should be kept on a larger scale, and more attention given to goats for milk.

HOW TO PLANT.

GENERAL.

Fork the soil, break it up fine and work in what manure, wood ashes or vegetable refuse there may be at hand. If good crops are to be continuously gathered from the same ground, the soil must be constantly replenished in food material. Mulching or covering the soil with a layer of grass or manure is very beneficial during dry weather, as it prevents rapid loss of moisture. Constant working of the surface soil, especially after showers of rain, by means of a hoe or cultivator has the same effect. This system of mulching or hoeing should be thoroughly practised.

Vegetables are best grown on raised beds, about four feet in width with a narrow path between. This assists in draining the beds and facilitates the working of the soil.

A necessary point in the growing of ground provisions and vegetables, and one that should be systematically practised is rotation; it generally being advisable to plan out in advance what crops shall succeed each other. The growing on the same piece of ground of one kind of crop year after year, tends to impoverish the soil of the particular food required by that plant, and does much harm in assisting the spread of disease and insect pests. Land from which diseased plants are taken should be planted with an entirely different crop.

YAMS.

Yams are prolific bearers and yield large crops if grown under suitable conditions.

The best method of cultivation is to open trenches $1\frac{1}{2}$ to 2 feet wide and eighteen inches deep, at a distance of four feet apart. Fork the bottoms of the trenches and fill them up with a mixture of old manure, and decayed vegetable refuse, leaves, etc., then put the soil dug out of the trenches on top of the manure, etc., so as to form banks about fifteen or eighteen inches high. Trenches dug at least two months before planting, may be filled with raw manure, but this must not be done when they are to be planted immediately. Plant the yams on the banks at 18 inches apart, placing pieces of dry branches, bamboo or other supports for the vines to climb on. Keep the ground clean of weeds and earth up after heavy rains.

Another method of planting yams, and one commonly practised is to dig holes at a distance of 4 feet by 4 feet and eighteen inches in depth, filling and ridging them as advised for banks.

Yam plants are prepared from (1) the yam heads or upper portion of the tubers (2) small yams or (3) the large yam cut lengthwise and then across into pieces about three to four inches square. Dry the cut surface or cover with ashes or lime, placing it uppermost when planting.

The best time for planting is in April or May just before the rains. The yam plants may be planted direct on to the ridges, or if the trenches are not ready may be started into growth in a bed of good rich soil, transplanting them as they begin to grow. The crop will take about nine months to mature. After digging the yams store them in a dark, airy room, and they will keep for several months. If any portions are decayed cut them out and cover the surface with white lime.

The best yams for planting are the Barbados white, Lisbon, Horn, Guinea and the Chinese or potato yam.

An average yield of 5 lb. per plant should be obtained, and often more.

SWEET POTATOES.

After deep forking or ploughing line off at 3 feet apart and bank the soil up in ridges about 18 inches high. Cuttings or slips, made from good stout pieces of stem, about twelve inches in length and from which the leaves have been removed are then inserted in the soil about one foot apart burying them to about half their length. Keep the ground weeded and repair any damage done to the banks by heavy rains. Plant the first batch at the beginning of the rainy season and the crop will be fit

for harvesting in three or four months, later plantings can be made to keep up a succession; the best crops often been reaped from the September and October plantings. The tubers of sweet potatoes vary in size, shape and flavour; the principal kinds are the red and the white.

Beans can be grown on the sides of potato or yam banks as they ripen early and do not interfere with the main crop.

TANNIAS.

Tannias thrive and yield best on rich hillside land in a moist situation. They do not do well on a wet and stiff clay. On sandy river banks, when not too dry and poor, they yield a good crop. Tannias will not grow under shade. Of the many varieties the "Mock" is the most useful and prolific.

When grown on suitable virgin soil the tannia plant does not need much cultivation; keep free from weeds and earth up at each weeding is, as a rule, sufficient to develop a profitable crop. When the conditions of soil and climate are not of the best then thorough cultivation of the soil is essential: draining, forking and manuring. The application of an over abundance of pen manure should be guarded against, as luxuriance of foliage is unduly encouraged and a short crop results. Ashes are a very good manure for tannias.

When the ground is prepared the tannias are lined off at distances of 4 feet by 4 feet in good and fair soil, in a poorer one 3 feet by 3 feet. Planting should be started at the end of the dry season or during any dry spell even in the wet season. The tannia heads may be used as plants or the stem part which grows above ground and is popularly known as the "Maman" tannia may be cut up into sections of a few inches and used as plants. Care should be taken to plant the "skin" part downwards—the cut surface uppermost—placing the cutting in a gently, sloping position, especially in a wet season, is advantageous as it prevents rotting.

Keep the tannia field free of weeds and earth up at repeated intervals. The full amount of earthing up if done all at once tends to develop elongated tannias of little value. After six months a first portion of the crop of each plant may be reaped; in no case should the plant be uprooted. In reaping the soil around the plant is removed in disconnected sections and the tannias in those sections, that are sufficiently mature, are pinched off. The plant is again earthed-up and some mulch, if procurable, put around the plant. This periodic reaping can be done at intervals of three months for eighteen months. When treated in this way all the roots are not destroyed and the set back to growth is just sufficient to discourage luxuriance of foliage and to encourage the development of the vegetable or tannia.

DASHEENS.

The Dasheen prefers a wet soil and will not do well on a dry loose one. On the stiff clays of the vega lands one dasheen plant will yield up to 20 lb. of foodstuff.

Running water will not do it harm but stagnant water must be drained off.

A trench or hole 6 to 8 inches deep and one foot wide is prepared to receive the plant, the bottom soil of the hole is broken up and the plant placed in it: a little loose mould is then thrown into the hole to secure the plant. In time the hole fills up from washings brought to it by rains and the plant thrives well and develops a large tuft. It is from the centre of the tuft that the largest dasheen is obtained—around this central one many smaller ones develop. When the crop is fit to be reaped the centre dasheen is removed carefully and the hole left by it in the centre of the tuft is plugged up with loose mould, the side dasheens then develop and can be reaped as required.

EDDOES.

Eddoes are not as fastidious, with regard to quality of land, as are the tannia and dasheen. Properly cultivated they do well on any soil. The method of cultivation is similar to that for tannia—being smaller plants they may be planted closer.

The “Chinese” eddoe is a hardier variety than the “Barbados” type which prefers a soil with a large proportion of lime.

CASSAVA.

Cassava is grown largely as a catch crop on land which is being newly planted with permanent crops, but it also pays to devote land entirely to its cultivation. To get good tubers the ground must be deeply worked with the fork or plough. Pieces of the mature woody stems about six inches in length taken from the middle portion of the stem are planted in a slanting direction covering them to two-thirds of their length in the wet season, and their whole length in dry weather. Plant at a distance of 4 feet by 4. The crop will be fit for gathering in from eight to twelve months, but can remain in the soil for some time after without injury. On being taken from the soil they must be made use of as soon as possible as the tubers become useless in a few days.

BEANS.

These make a good rotation crop; many of them form valuable foods, and can be readily grown. Sow the seed singly about 3 feet apart.

The *Wax pod* or *Butter bean*, of which there are both dwarf and climbing varieties, is one of the best beans to grow for table use. *Dwarf French* or *Kidney beans* also succeed well, and there are other kinds such as Lima beans which thrive remarkably well. These all succeed best on a deeply dug, well drained soil, and will respond readily to manure; wood ashes, lime and crushed bones suiting them admirably. For climbing varieties sow the seed in drills $2\frac{1}{2}$ feet apart (*i.e.* two drills to a bed) and about 2 inches deep, placing the seeds about 6 inches apart in the drills. As soon as they begin to grow place a row of stakes four or five feet high on either side for them to climb on.

For dwarf, kidney, or bush beans plant the seeds singly in the beds 6 inches apart each way. Earth the plants up when they are about 8 inches high by pulling the soil around the stems. As noted above dwarf beans may be grown on yam and potato banks.

The *Overlook* or *Sword bean* (*Canavalia ensiformis*), a dwarf grower, is also useful both as a vegetable and a cover crop.

PIGEON PEAS.

Sow the seeds during the wet season in groups four feet apart and thin the seedlings to one plant to each hole.

CABBAGE.

Good heads of cabbages can be obtained from deeply dug, heavily manured soil if the seed be sown at the right time of the year. The first sowing should be made at the end of November, afterwards sowing a batch every month until March to keep up a succession during the dry season. They will mature on rich soil in three months. Procure fresh seed of a flat-headed variety such as Sutton's "Maincrop," Landreth's "Surehead," or Landreth's "Bloomsdale" all of which thrive well under tropical conditions. Sow in shallow, well-drained boxes or in beds of finely prepared soil in the open ground, or on raised bamboo stages tarring the uprights to keep away ants. Sow the seeds thinly, lightly cover with fine soil and keep well watered. As soon as the seedlings are above ground, prick them off into other boxes where they may remain in a position exposed to full sunshine till four or five leaves have formed, when they are ready for planting. If the seeds are sown thinly in beds, they can remain there till large enough to plant into their final position.

When planting place the young plants two feet apart and give a good soaking of water. Cabbages will make a good crop to follow yams as the land will be again vacant by the time it is wanted for that crop.

In the wet season a cabbage, locally known as the Creole cabbage, can be grown. It is a variety which has been propagated by shoots for a number of years. They do not form hard heads at this season, but the young succulent shoots make a good table vegetable. Young plants are raised from shoots taken from old stumps left in the ground from the previous wet season, and treated in the same way as seedlings.

ARTICHOKES.

Artichokes make an excellent substitute for potatoes. They like a sunny situation. Select good tubers and plant in rows two feet apart, one foot in the rows, and 3 or 4 inches deep. The best time to plant is in the rainy season at intervals of about six weeks; in this way a supply can be obtained for the greater part of the year. Artichokes are prolific bearers, and a few beds will give quite a large supply. All the attention necessary after planting is to hoe the beds and keep down weeds until the leaves and stems begin to die off when the crop is ready to be gathered.

KOHL RABI.

This vegetable is a member of the same family as the cabbage, the swollen gouty stem being the principal edible portion of the plant although the leafy tops are also eaten. To be of good quality they should be grown quickly and used when quite young, or they will be stringy and possess a rank flavour. As a substitute for turnips they are excellent the smaller varieties being the best for human consumption.

Sow the seeds as advised for cabbage, and when large enough to handle transplant into well manured beds in rows 15 inches apart, and 9 inches in the rows keeping the soil between constantly stirred. Kohl Rabi should be fit for the table in about ten weeks from sowing. They do remarkably well in Trinidad and should be more largely grown; at present they are but little known.

CARROTS.

Sow the seed in shallow drills one foot apart and lightly cover with soil; thin the seedlings when quite young to a distance of three inches apart.

When large enough for the table pull out every alternate plant, and allow the rest to mature which should take about three months. In dry weather give plentiful supplies of water and keep the beds well hoed.

TOMATOES.

Among the many varieties tested, the following can be recommended, "Ham-Green," "Sunrise," "Champion," "Globe," "Red Rock," and "Ponderosa." Sow the seeds thinly in boxes, or in well prepared beds in the open ground, to obtain sturdy plants, transplant to other boxes or beds when they are about two inches high. The final transplanting should be into beds which have been well trenched and manured. Plant in straight rows three feet apart at a distance of two feet between each plant in the row. Each plant should have a strong four feet stake for support and be tied to it as necessary. All lateral or side growths should be pinched out as fast as they appear, or these will grow at the expense of the fruit. The tomato is a gross feeder and should be liberally supplied with well rotted pen manure when the young fruits have formed. Tomatoes are occasionally subject to various diseases particularly during the wet season, and when badly attacked it is advisable to burn the plants and grow the next crop in a different part of the garden.

EGG PLANTS OR MELONGENES.

Seeds should be saved from good selected fruit, and sown either in beds or boxes; transplant the seedlings when large enough in beds of heavily manured soil at a distance of 3 feet by 5. The flea beetle often proves troublesome, and to check this the plants should be occasionally sprayed with Bordeaux mixture to which is added lead arsenate paste in the proportion of 4 lb. to 50 gallons of the Bordeaux mixture. If sprayed with the latter the fruits should be thoroughly washed before being used.

PUMPKINS, SQUASHES AND CUCUMBERS.

Dig the trench two feet deep and of about the same width; fill with well rotted pen manure, replacing all the soil to form a bank or ridge. Sow the seeds three feet apart on the bank or a few inches apart in boxes, and transplant when several leaves have formed according to the variety. Pinch out the tips of the plants when they are about 6 inch high, and afterwards pinch off the tip of each shoot two joints beyond the young fruit to cause them to swell. Attacks of green fly or aphids which sometimes prove troublesome can be kept in check by spraying with a solution of nicotine, 1 part in 500 of water.

PESTS.

By F. W. URICH,
Entomologist, Board of Agriculture.

With the exception of corn and sweet potatoes most of our food-crops escape serious insect pests, during their growth. It cannot be said that they are quite free from insects but as a rule there are not enough present to hamper them to any great extent.

A good rule in connection with any crop is to have a rotation which consists in not planting the same crop in succession on the same fields. Another simple precaution to take is not to leave stray plants, old fruit or bits of tubers lying about in the field after harvesting. It is a good rule to remove all plants from a field, as in many cases, insects go on breeding in the crop remnants and are so carried over from one season to the other. When land is being prepared for replanting, it is generally forked. This operation does a great deal of good in exposing soil-inhabiting insects to the attacks of their natural enemies. Besides that, the removal or burning of all weeds and stray plants left over from the previous crop should never be omitted. Growing corn is subject to the attack of the "corn worm" or caterpillar of the moth *Laphygma frugiperda*. It is generally worse on young plants at the opening of the rainy season, but if the precaution is taken of controlling the first brood of the season, successive broods will give very little trouble, besides which the corn will get a chance of having a good start. The ravages of the corn worm are so well known that often wood ashes are put in the funnel of the corn to prevent the injury, sometimes earth is used instead. The measures just mentioned do a little good, but far better results would be obtained if a stomach poison were used instead, such as arsenate of lead or Paris green. Paris green can be dusted on the plants by means of a muslin bag tied to a stick. It should never be used pure but mixed with air slaked lime or wood ashes in the proportion of 1 pound Paris green to 6 pounds ashes or lime. Arsenate of lead can be obtained both in powder and paste form; in the former state it is used like Paris green. In the paste form it is used in the proportion of 1 pound of paste to 12 gallons of water. Paris green is said to act more quickly than arsenate of lead. In using Paris green and arsenate of lead the precaution must be taken not to cut grass for animals in the treated fields for at least a fortnight after treatment as both substances are poisonous to stock.

Potato vines are often attacked by a borer which lives in the stems of the plants. In severe infestations the vines are so badly affected that they will produce very few tubers. The borer is the caterpillar of a moth, fortunately it is not very widespread. The best method of control is rotation of crops and selection of cuttings. Cuttings for planting should be very carefully examined for caterpillars before being used; as the borer is an internal feeder, it is difficult to get at when once in the stem, and in severe infestation it is best to cut out all the infected stems and burn them.

A good rule for all crops is to be always on the look out for any insects affecting them and remove them by hand picking early in the season.

HOW TO USE LOCAL PRODUCTS.

CORN AND CORN MEAL.

ONE pound of corn contains as much starch, etc., and more than twice as much nitrogenous material as three pounds of sweet potatoes. Grow all the corn you can. Store in the cob hung up in an outhouse, over rafters, etc., or shell and dry it and place in well closed tins, demijohns, or good barrels, etc. Put some mothballs (naphthalene) at the bottom, or instead put in a little ant poison (carbon bisulphide) on a piece of rag or in a shallow tin at the top once a month; a teaspoonful is enough for a barrel. Neither will hurt the corn for food purposes or give it any flavour if it is exposed to the air before being used.

St. Augustine Estate has a kiln drier and a corn mill. Meal can be ground from your corn at cost price. For particulars apply to the Manager.

Corn meal can be made in small mills which can be bought locally at a cost of about \$5 to \$10. Put the corn through the mill, sift, and put the coarser portion through again. Small quantities can thus be prepared for use as required. A barrel of corn sold when fresh for say \$2.00, will yield about 70 lb. of corn meal, worth at 6 cents per lb. \$4.20.

A few people in a district could club together and buy a mill, or one buy it and make a small charge for the use of it or for grinding corn.

JOHNNY CAKE: One cupful of corn meal, and one of flour; half a teaspoonful each of bicarbonate of soda and baking powder; one-third of a cup of sugar; a teaspoonful of salt, and one and a half cups of milk. Mix and *sift* the dry ingredients together, twice, and then add the milk gradually. The sifting is important to ensure proper mixing. Beat well and bake in a shallow, well greased tin in a moderate oven.

It is particularly good with coconut butter, and honey, and keeps well for at least two days.

COCONUT CAKE: The same mixture as above with a cupful of grated coconut added to the dry materials before the milk makes an excellent cake for children. The oil already in the coconut renders it unnecessary to add any butter.

A JAMAICA RECIPE: One teacupful of maize meal, a piece of salt, boiling water. Sprinkle the meal into one pint of boiling water, boil *slowly* for half an hour, stirring now and again. At the end of the time turn into a shallow dish. When cold, cut into squares and fry a golden brown in hot fat as required. If you are going to use the mash as a pudding after the meat a tablespoonful of sugar should be added to the meal. Sufficient can be made to last two or three days, and it can be used as a batter pudding with meat, eaten with jam, etc. It tastes like Yorkshire pudding, and has the great advantage of not requiring any milk or eggs in it.

AREPAS OR CORN BREAD.*—Take the required quantity of corn and first crack it either by use of a corn mill or, preferably, in a mortar by hand so as to avoid cracking it too fine.

* Recipe kindly supplied by Mr. H. Dalla Costa.

The cracked corn is then winnowed and carefully separated from all chaff and other impurities. It is next scalded or *parboiled*, taking great care to *avoid cooking it to a soft consistency*; it is next allowed to cool and then ground in a suitable mill, adapted for the purpose, to a soft, consistent mass.

This mass is salted to taste, usually by the application of salted water but only in such quantity as will not render it too soft or watery. The mass, duly salted as described, is formed into balls of a suitable size or weight, flattened by hand into biscuits and placed on baking irons such as are used for baking cassava bread, and allowed to bake taking great care to turn them occasionally to avoid scorching.

These biscuits should be baked in a slow fire of live coal cinders.

Suitable mills for grinding the scalded corn can be had at Messrs. Davidson and Todd.

SWEET POTATOES.

About two-thirds by weight of fresh sweet potatoes is water. It takes 8lb. of sweet potatoes to yield as much starch and sugar, etc., as one pound of corn, and even then there is less than one half the amount of nitrogenous matter. Two ounces of dry beans or peas with every pound of sweet potatoes will more than make up this deficiency. Meat or salt fish will serve a similar purpose. The uses of sweet potatoes are well known, but the following recipes may be of interest to some:—

BOILED SWEET POTATOES.—Boil the potatoes in water with their jackets on, peel and cut into slices before serving.

STEWED SWEET POTATOES.—Peel and slice about four or five pounds of sweet potatoes, take a cup of sugar, a tablespoonful of flour, a tablespoonful of butter and a little salt. Lay the sliced potatoes in an enamelled saucepan in layers sprinkled with sugar, butter and flour, and after adding the last layer pour over it a cup of water. Stew gently, giving the pot an occasional stir.

BROILED SWEET POTATOES.—Half boil the potatoes, remove the skin and put them into the oven or before the fire until done, when they should be of a nice brown colour. Cut into pieces and serve hot.

FRIED SWEET POTATOES.—Cut cold boiled potatoes in thin slices, season with salt, put them into the frying basket, and cook in fat for five minutes.

SWEET POTATO RICE.—Boil sweet potatoes until tender, squeeze through a colander or presser on to a hot dish, shaking lightly every other minute to cause the potatoes to fall off in short grains like rice, serve very hot. This will be found a nice accompaniment to any meat course.

SWEET POTATO RISsoles.—Boil and smash the potatoes, add pepper and salt, and, when liked, a little minced parsley. Shape the rissoles, cover them with egg and bread crumbs (or banana or other meal) and fry until a light brown.

ROASTED SWEET POTATOES.—Lay them before the grates of the stove or in the oven, turning them occasionally until cooked. Scrape off the outer skin and cut into pieces or crush with butter and serve hot.

TO COOK DRIED SWEET POTATOES.—Pour boiling water over them the night before they are wanted, next day boil, peel and dress with butter. For the preparation of dried sweet potatoes (see page 20).

YAMS.

Yams take longer to grow than sweet potatoes but they keep much longer and can be stored for many months. With proper care in their cultivation Yams are one of the best crops to grow on a garden or the estate scale. Begin preparations early. *See* page 5.

ROASTED YAMS.—Lay a yam before the grates of the stove or in the oven, turning it occasionally until cooked. Scrape off the outer skin, cut into pieces or mash with butter and serve hot.

BAKED YAMS.—Pare a yam, bake until soft. Take it out of the skin and mash with butter; put back into skin, cut in pieces and serve hot.

BOILED YAMS.—Pare a yam, put it into boiling water, cook until tender; serve whole or sliced.

YAM CHIPS.—Pare and boil until tender. Cut in chips, fry in boiling fat and serve hot.

YAM BAKES.—Grated fresh yam mixed with a small amount of flour make excellent bakes.

Yams keep so well that there is no point in converting them into dried chips or meal for storage purposes.

DASHEENS.

The dasheen is far too little used locally. On the other hand its cultivation and use are extending rapidly in the United States of America where it is appreciated. The United States Department of Agriculture some years ago collected together many varieties of dasheen from different parts of the tropics and found the Trinidad dasheen the best. Dasheens are more nutritious than ordinary potatoes. The following notes are taken from a recent publication of the United States Department of Agriculture :—

If uncooked dasheens are scraped they should be handled in water to which sodium carbonate (washing soda) has been added—a level teaspoonful to the quart. This prevents the stinging irritation to the hands that often arises from the action of the acrid juice of the outer layer of the raw dasheen when mixed with water. This irritating property is destroyed by cooking. In ordinary paring, most persons do not find it necessary to use the soda.

The following recipes, suggested by various experts in cooking, have been put into their present form after being thoroughly tested. However, they are not regarded as being necessarily the best possible, and suggestions from anyone will be welcomed.

BAKED DASHEENS.—In baking dasheens a moderately quick oven is required. Do not bake so quickly nor so long as to char the outside. The time required for cooking dasheens is usually a little less than that for potatoes of the same size; those weighing more than a pound may be cut in half from top to base before cooking. The dasheens may be (1) baked in the skin, or (2) scraped, though it is generally better to bake in the skin.

1. For baking in the skin, clean the dry dasheens, by pulling off the loose fibre or by rubbing it off with a brush or cloth. Small tubers, especially if very dry, should be soaked in water for a few minutes before placing in the oven. Corms and large tubers should be parboiled; place in nearly boiling water, and boil from 10 to 20 minutes (corms freshly dug split open if boiled longer than 10 minutes). As parboiling reduces the time required for baking, there need be no waste through the forming of a hard crust. When done, *serve immediately*. Season with salt and plenty of butter; add pepper if desired. Gravy may be used in place of butter.

Baked corms may be served in the "half-shell"; place a piece of butter in a hole made in the centre of the cut surface. Small half corms may be served as individual portions.

2. In scraping dasheens, as previously stated, they should be handled in water containing sodium carbonate (washing soda)—one teaspoonful to the quart. They may be cooked in one of three ways: (1) roasted with meat; (2) rubbed with fat and baked; (3) immersed in nearly boiling water long enough to heat through, and baked. With the last two methods a particularly delicious soft crust is formed, provided the dasheens have not been baked either too quickly or too long. Serve immediately.

BOILED DASHEENS.—Either large dasheens (corms) or small ones (tubers) may be used for boiling. They should be boiled in the skins, and may be served thus or with the skins removed. Dasheens need not be cooked quite so long as potatoes of the same size. They are, in fact, made less palatable by prolonged boiling; it is well to test with a fork or knitting needle.

The small tubers are especially good if, immediately after being boiled and peeled, they are placed in the oven just long enough to melt a dressing of butter over them. When so prepared, if kept in a warm place, they are less likely to become soggy from standing. Instead of placing them in the oven the tubers may be fried slightly, either whole or in halves.

It is usually better during the autumn and early winter to parboil the large dasheens (corms) for only 10 minutes, and then bake, as the corms split open and become water-soaked if cooked entirely by boiling at any time within a month after they are dug.

RICED DASHEENS.—Boil (or parboil and bake) the dasheens in their skins. Remove the skin immediately, rice the dasheen into a heated dish; and proceed in one of the following ways:

(1.) Stir in the desired seasoning, as butter and salt, and serve in a warm covered dish. The butter may be omitted if gravy is to be used. (Milk or cream may be beaten in if desired, as for mashed potato; but Dasheens prepared in this way will be rather sticky. Mashing in the ordinary way is not recommended.)

(2.) Empty the riced dasheen in layers into a warmed serving dish; season each layer. Do not stir.

(3.) Season the riced dasheen as desired and put into a baking dish, with a liberal quantity of butter on top. Bake for 8 or 10 minutes and serve.

In ricing dasheens the round or plunger type of ricer rather than the triangular, lever type should be used. One with wrought-iron handles is better than one with cast-iron handles, as the latter are too easily broken.

STUFFED DASHEENS.—Proceed the same as in baking; and, when the dasheens are done, follow the method used for stuffed potatoes, using more butter, however. If moistened with cream, instead of milk, still better results are secured.

The corms are especially adapted for serving in this manner; they may be scraped or simply scrubbed, as preferred: and, unless much smaller than a pound in weight, they may be cut in half,—always from the top to the base. Instead of mashing dasheens it will always be found better to rice them with a potato ricer or rub them through a coarse sieve. If, after baking, the upper part of the corm is found to be hard, this part should be taken out and discarded.

SCALLOPED DASHEENS.—Pare and slice raw dasheens, putting the slices in layers into a buttered baking dish, and seasoning each layer with butter, salt, etc. A few thin slices of onions added brings out the dasheen flavour. Latticework slices of dasheen, made with a fluted slicer, are a little more attractive in appearance than the plain ones, and they do not mat together. Nearly cover with rich milk, and bake. Scalloped dasheens require only about two-thirds as much time in cooking as scalloped potatoes. When corms are used for scalloping, it is well to discard about three-quarters of an inch of the upper, or bud end, as it may be tough after cooking. On account of the firm texture of the dasheen, a slicer with the sliding guard made of wood, rather than of tin, is desirable if a fluted slicer is used.

This method of serving the dasheen will be found particularly well adapted for banquets or formal dinners; and in such cases individual baking dishes or casseroles should be used if practicable.

DASHEENS AU GRATIN.—Proceed as for scalloped dasheens, but use less butter and add grated cheese. Bread crumbs may also be added to the top layer.

DASHEEN CRISPS.—Dasheen crisps are especially recommended. They are made by cutting the raw dasheens into latticework slices, as for scalloped dasheens, or into fluted slices, and frying slowly to a straw colour in deep fat. Drain on clean paper, and salt immediately. It is well to soak the sliced dasheens in water for an hour or so, and dry them between cloths, before frying.

DASHEEN SARATOGA CHIPS.—Dasheen Saratoga chips are made in the same way as potato chips. Pare raw dasheens, and if the outside has become wet with water, dry them; slice about one-sixteenth inch thick, soak in plenty of water for from one to two hours, changing the water once, and dry the surface of the slices between cloths. Fry in deep fat to a straw colour. Place the chips on clean paper so that the excess fat may be drawn from them. Salt immediately when taken from the hot fat.

FRIED DASHEENS.—Slice boiled dasheens, either warm or cold, season with salt, and fry quickly in plenty of fat. If fried too long they become dry and hard.

French-fried dasheens are also exceedingly good. Care should be taken to see that they are not fried too long.

Boiled dasheens, while still hot, may also be mashed or put through a potato ricer, mixed with grated cheese, made into cakes or croquettes, and fried. The cheese may be omitted and the croquettes dipped in egg and cracker crumbs before frying.

DASHEENS GRIDDLECAKES.—Excellent griddlecakes are made by using one part of grated raw dasheen to one, two, or three parts of wheat flour, with the other ingredients as usual.

DASHEEN FRITTERS.—1 cup of grated or finely ground raw dasheen 1 cup of white flour, 1 tablespoonful of sugar, $\frac{1}{2}$ teaspoonful of salt, 2 teaspoonfuls of baking powder, $\frac{1}{2}$ cup of milk.

Mix the dasheen and the dry ingredients, and add the milk. Drop heaping teaspoonfuls into deep hot fat and fry to a golden brown. Sprinkle with powdered sugar, and serve immediately; or serve with maple or sugar syrup. These fritters make one of the most thoroughly delicious of all dasheen dishes.

CREAMED DASHEENS.—Boil the dasheens in the skin and proceed as for creamed potatoes.

DASHEEN SALAD.—Boil medium-sized or small dasheens in the skin and proceed as for potato salad. The addition of onion improves the salad. It is very important to prepare the dasheens while still warm and to add the dressing at once.

DASHEENS AS FILLING FOR FOWL AND OTHER MEATS.—2 cups of riced dasheen, 1 cup of bread crumbs, 1 egg, 2 tablespoonfuls of butter, season to taste with salt, pepper, sage and onion.

The dasheen should be boiled and riced in the usual way. They make a particularly delicious filling, comparable with that made with chestnuts.

DASHEEN SOUP.—3 cups of boiling water, 3 cups of milk, 3 cups of riced dasheen, 3 tablespoonfuls of butter. Salt and celery salt to taste Parsley or grated onion if desired.

Boil and rice the dasheens as described. Into a double boiler put the boiling water, and add the milk and dasheen. Bring to boil and cook for 5 to 10 minutes. Season and serve.

CANDIED DASHEENS.—Peel parboiled dasheens and cut into thick slices or strips. Prepare a syrup made in the following proportions:

1 cup of sugar, 2 cups of hot water, 2 to 3 tablespoonfuls of butter. Salt to taste.

Either granulated or brown sugar may be used. Cinnamon may be added if desired. Boil in this syrup in a covered dish until soft, and brown in the oven.

This dish is very similar to the candied sweet-potatoes so commonly served as one of the vegetables to accompany roast meats and fowl.

DASHEEN BREAD.—Make the bread in the usual way; but replace one-fourth or one-third, by measure, of the wheat flour with boiled and riced or mashed dasheen. The dasheens should always be boiled in the skin. The bread, which is much like that made with potato in a similar way, is usually a little darker than when made from all wheat; but the texture and flavour are excellent, and the bread does not dry out so quickly.

DASHEEN PIE.—Any recipe for sweet-potato pie will probably do, but the following is suggested as being economical and otherwise satisfactory. The dasheens should be boiled and riced as usual.

2 cups of riced dasheens, $\frac{1}{2}$ cup of butter, $\frac{3}{4}$ cup of white sugar, $\frac{1}{2}$ teaspoonful of cinnamon, $\frac{1}{2}$ teaspoonful of nutmeg, 1 egg (white and yolk beaten separately), 2 cups of milk, $\frac{1}{2}$ lemon, juice and rind.

Bake in a deep pie tin. Serve warm.

DASHEEN PUDDING.—Proceed the same as with the above recipe for pie. Bake without crust in a deep dish well buttered.

TANNIAS.

These can be used in many of the ways given for dasheens.

CASSAVA PRODUCTS.

In addition to the use of cassava as a vegetable it can and should be much more largely employed in other ways.

CASSAVA FARINE.—Grate or rasp the peeled tubers, pressing or squeezing the mass through a press or strong cloth to extract the juice, and then place in a heated iron-pot or on a piece of an old sugar copper, which should first be rubbed with a piece of "fat pork" to prevent the cassava sticking or burning. The material must be constantly stirred with a wooden rake whilst being dried, when it should be of a uniform creamy colour and will keep for a long time stored in a dry place.

Farine in its crude form is frequently seen on tables and is used as a vegetable with gravy, or it is mixed with tepid water a quarter of an hour before required and also used as a vegetable, or mixed with water and baked into cakes (native method).

Soaked in milk it can be made into a pudding with eggs and sugar, when it is practically undistinguishable from tapioca.

Dry farine crushed up with ripe avocado pears is very much relished as a dish.

Farine can be used in the place of flour for fish cakes, meat cutlets, croquettes, &c., and boiled in milk it makes an excellent porridge.

CASSAVA BISCUITS.—Grate cassava, squeeze out the juice, rub through a fine sieve. The finely sifted cassava is thinly spread in rings or moulds on a hot iron sheet or girder, the heat sets the cassava immediately, when it is formed into a biscuit. The biscuits should be turned from side to side until thoroughly dried without scorching or burning. A biscuit can be turned out of the ring as soon as it is set and the ring filled again and again; thus several biscuits can be made in a short time these biscuits are an excellent substitute for bread and will keep well if properly made and stored in a dry place. Cassava biscuits are known locally as cassava bread.

Toasted they are a good substitute for ordinary toast; they can take the place of bread for early breakfast and tea, and should be buttered when hot.

CASSAVA CHIPS.—Cassava can be sliced and dried as chips as described under meals. These pound up or mill very readily and the meal can be used in bakes, etc. as a flour substitute.

TAPIOCA is made by allowing the juice expressed in making farine to settle in tubs; the liquor poured off, the fecula heated in a hot pot by which it becomes partially cooked and agglomerated in small, hard irregular lumps. Tapioca is principally used for puddings, soups and invalid's food.

CASAREEP is also made from the juice expressed in making farine, which is simply boiled down until it resembles molasses in consistency and colour. Casareep is an excellent preservative for meat, is the foundation of many well known sauces and the basis of the famous "Pepper Pot."

An excellent paste is made by boiling the casareep down until it is almost solid; then add red pepper, allspice, cloves, bruised chives, butter, fat pork and a little sugar, or salt, whichever is preferred. The concoction is thoroughly stirred with a wooden spoon and when thoroughly cooked is passed through a sieve and allowed to cool when it sets into a thick paste and can be spread on bread, it is generally used for flavouring soups, gravies, &c., and keeps for a long time.

Cassava farine, biscuits or bread, tapioca and casareep can all be made from one lot of cassava, one after the other.

CASSAVA STARCH is made by peeling the tubers, grating or rasping them and then putting the grated cassava into strong cloths and washing out the starch with clean water: allow to settle, pour off the water and spread the starch in trays to dry. The refuse cassava is used for feeding stock. The starch is used for making "Starch cakes" with sugar and water.

BREADFRUIT AND BREADNUT.

The Breadfruit is very similar to yams and sweet potatoes in composition, but with much less water, so that whereas 1 lb. of sweet potato or yam contains about 2 oz. of starch and only 12 oz. of water, 1 lb. of breadfruit contains 6½ oz. of starch and only 7 oz. of water; it is also richer in nitrogenous matter. The breadfruit is not grown so largely here as in some of the other West Indian Colonies. The local supplies should be made the fullest possible use of at the present time, as also the Breadnut.

The fresh fruit can be easily cooked in various ways which are generally well known, *e.g.* as a soup, sliced and boiled, roasted, fried, &c.

A writer in the *Journal of the Jamaican Agricultural Society* (February, 1916) says: "Take enough roasted or boiled breadfruit and make these into a fritter in the ordinary way and you have what in my opinion is one of the most delicious fritters in the world and I will bet 99 people out of 100 would never guess what it was made of but would at the same time vote that it was a delicious fritter."

TO STORE BREADFRUIT.—To prepare dried chips and meal the breadfruit is peeled, cut into slices and sun dried for 4 or 5 days. The dried chips store fairly well and can be soaked and steamed as a vegetable. The meal made by milling or pounding the dried chips and sifting through fine muslin makes excellent porridge and with the addition of a little wheaten flour can be made into dumplings.

STUFFED BREADFRUIT.—Half-cook by boiling a breadfruit with the rind on. Remove the top and scoop out part of the centre. Stuff with meat, etc., replace the top piece and bake.

BREADNUTS.—These are well known as a nutritious food, boiled and eaten with a little salt.

BEANS AND PEAS.

The uses of these are well known and it is not necessary to refer to most of the many different varieties which will thrive here in any detail.

The important thing to remember is that supplies can be cheaply and quickly grown and there is no necessity to import them. Dhal which is imported from India to the extent of about £18,000 a year is mainly dried pigeon peas. They could be grown as a field crop, cut down and the seeds thrashed out.

The smallest garden can grow supplies of red beans from the ordinary bean as sold in the stores. They are useful both as green beans and when dried. At present they cost 18c. per lb. in Port-of-Spain. Black eye peas are a very quick crop and being produced locally in abundance should be much more largely used. The horse or sword beans (*Canavalias*) see p. 7) have here and elsewhere been proved to be quite wholesome, although there is a strong local prejudice against them. Beans and peas are very useful as rotation or catch crops and can be planted amongst young canes.

BANANAS AND PLANTAINS.

Fresh bananas and plantains contain about a quarter of their weight of starch or sugar—the proportion varying with the degree of ripeness. In unripe bananas starch is the chief constituent of value as food, and as the fruits ripen the starch changes into sugar.

Plantains are largely appreciated as a food and are extensively used either boiled or fried. The Colony does not grow enough for its own requirements and imports them largely from Venezuela.

Bananas are available in most districts. By increased use of the fresh ripe fruits the demand for bread can be reduced. They can also be cooked in various ways. As a vegetable they are prepared as plantains.

GRILLED BANANAS: Lay ripe fruits, in their skin, on any convenient support over a fire, and cook for about 10 to 15 minutes. Serve hot, open at the table and eat with a spoon.

BANANA PUDDING: Fill a greased dish with ripe (but not overripe) bananas peeled and cut into half lengthways. Put a little sugar between each layer of fruit, and bake for about 20 minutes. A little lime juice may be added.

From unripe bananas meal can easily be prepared, see below. No unripe bananas, however small the bunches, should be wasted. If not required for the house feed pigs on them.

PREPARATION OF MEALS.

The most valuable and most nutritious of the meals which can be produced locally is corn meal which has been dealt with already, p. 11.

Detailed information on other meals is given in the *Bulletin, Department of Agriculture*, XVI, No. 2 pp. 70-83. Bananas, sweet potatoes, tannia, dasheen, all yield meals which can be used as a substitute for wheaten flour in making bread, porridge, Johnny cakes, dumplings, roti, etc., etc.

The best way to store any of these products is as dried chips which can be converted into meal as required. The Department has samples which have kept perfectly good for twelve months. During damp weather it may be necessary to resun them when opportunity offers.

BANANA MEAL.

Any kind of banana or plantain is suitable.

Cut the bunch when it is about three-quarter full or the fruit will ripen instead of drying.

Peel the banana and slice thinly with a nickel or fruit knife or one made from a thin piece of bamboo.

Do not use steel knives. Spread the sliced bananas thinly on wooden trays in the sun to dry. In fine weather they will dry in two or three days.

When dry crush in an ordinary corn mill or pound in a mortar and sift through fine muslin.

Banana meal is the cheapest to produce of those experimented with.

USES OF BANANA MEAL.

Banana meal is very digestible and nutritious. Good bread (*See* page 21) can be made by using one part of banana meal with two parts of wheaten flour, proceed in the same way as for making ordinary bread.

Banana meal cooked and eaten as oatmeal porridge is an excellent food.

Used in the form of milk pudding it is prepared in the same way as rice pudding and it is very palatable.

Make your Johnny cakes, roti and dumplings by mixing banana meal with wheaten flour in whatever proportion you find suits you best.

DASHEEN, SWEET POTATO, TANNIA and CASSAVA can all be made in the same way as advised for Banana meal, *i.e.*, peeling, washing, slicing and milling the dried chips. Excellent bread etc., can also be made from any of the above meals with wheaten flour.

It is really unnecessary to peel sweet potatoes as the skin is so thin; they should then of course be well washed.

The preparation and use of these meals is particularly recommended to people in country districts who are accustomed to growing and preparing a good deal of their own food and at certain time have more bananas, sweet potatoes, cassava, &c., than they can use immediately and which if not converted into dried chips may be wasted.

BREAD WITH FLOUR SUBSTITUTES.

Bread can be made from a mixture of wheaten flour and banana or other meal, but in what proportion is a question for the consumer to judge for himself. Banana bread is dark in colour, or lighter according to the amount of wheat flour added, this probably being the only reason why some people prefer the addition of wheat flour in larger proportions. Dasheen and sweet potato, make lighter coloured breads. The addition of a certain proportion of wheat flour is necessary in all cases to give the bread the proper consistency.

BAKING POWDER BREAD.--Take 1 part of banana meal, 2 parts of wheaten flour. To each pound of the mixture add half a teaspoonful of salt, and one and a half teaspoonfuls of baking powder. Mix all thoroughly, and then add enough *cold* water to make a rather moist but not too wet dough.

Do not knead but put into a well-greased tin and bake *at once* in a moderate oven for about an hour. If the dough is allowed to stand for even a very short time after mixing it will become sodden and heavy.

YEAST BREAD.--Take a small quantity of yeast and about half a teaspoonful of brown sugar and a tablespoonful of wheaten flour. Mix this with warm water to the consistency of thick cream. Allow this mixture to stand in a warm place for two or three hours to form a *sponge*. Make a mixture of 2 parts of wheaten flour, 1 part of other meal; add half a teaspoonful of salt to each pound. Knead this thoroughly into the sponge to make a stiff dough. The kneading is very important. Place the dough in a well-greased tin, and stand in a warm place for two or three hours to rise again. When the loaf has risen to about two and a half or three times its original size, bake in a moderate oven for about an hour.

SWEET POTATO BREAD.--One cupful of mashed potato, one cupful cornmeal, one cupful of flour, two teaspoonfuls baking powder; mix quickly into a dough, bake in a hot oven.

DASHEEN BREAD.--Make the bread in the usual way; but replace one-fourth or one-third by measure, of the wheat flour with boiled and riced or mashed dasheen. The dasheens should always be boiled in the skin. The bread, which is much like that made with potato in a similar way, is usually a little darker than when made from all wheat; but the texture and flavour are excellent, and the bread does not dry out so quickly.

CORN BREAD.-- $\frac{1}{2}$ lb. corn meal, $\frac{1}{2}$ lb. wheat flour, 1 teaspoonful of salt. Raise with either yeast or baking powder.

DO NOT WASTE STALE BREAD:--(1) Use for making toast (2) stuffing for fish, meat or poultry (3) puddings (4) dry crumbs for fried food.

Freshen a loaf of stale bread by placing it in a moderate oven for 15 minutes, or until heated through.

COCONUT BUTTER AND OIL.

"Butter" made from coconuts has been extensively used in Europe for several years, although sold under other names. Coconut oil—either liquid or solidified—has been proved to be very digestible and it should be largely employed in place of butter, oleomargarine, cooking oils now that these are all so difficult to obtain and even then usually at greatly increased prices.

COCONUT BUTTER.

Peel dry coconuts and grate into a bowl. Pour hot water on the grated material in the proportion of about 1 pint of water for each nut, and allow to stand for about one hour, then strain through coarse muslin, squeezing out all the liquid as completely as possible. Put aside in a bowl all night, or for a few hours if made during the day, by which time all the oil will have risen like cream to the top of the water. Skim the oil off, and place in a churn or wide-mouthed jar, and add 1 teaspoonful of salt for each nut used. Stand the jar on ice or in an ice chest, until thoroughly cold. Then churn by shaking the bottle, or otherwise, and the butter will form in about ten minutes. Turn the mass out into a cloth, mould to shape, and keep in the ice chest.

I am indebted to Lady Watts of Barbados for the note that a *small* metal ice cream freezer makes the butter more quickly than the use of a churn, or cooling a bottle and requires only a small amount of ice.

Some prefer to boil the grated nut after the water is added.

One large nut yield 3 to 4 ozs. of butter.

Coconut butter does not keep more than two days, and so should be made in small quantities as required.

It is a good substitute for ordinary butter both for table use and for cooking,

COCONUT OIL.

This is made in a similar manner so far as skimming the cream off after standing. Then, instead of churning, the cream is placed in a pot, and *gently* heated until all the water is driven off. The addition of a little lime juice causes any solid matter in the oil to settle. When cool, bottle for use.

The meal left after oil or butter is made is an excellent poultry feed.

OTHER OILS AND FATS.

Various nuts contain large quantities of an edible oil, *e.g.*, gru-gru kernels, Brazil nuts. The Ground nut or "pistache" has about 50 per cent. of oil in its kernels. It is readily grown in light soils, and might well be more largely cultivated and used.

The avocado contains about 10 per cent. of oil 6 per cent. of starch and sugar in the pulp of the ripe fruit. It is thus of value as a substitute for butter or other fats as indicated by being often called midshipman's or subaltern's butter.

FEEDING OF STOCK.

The economical feeding of stock, with due regard to the health of the animals is a subject second only in importance to the feeding of the

human population. Cattle food and oats are imported to the value of some £70,000 per annum. They occupy considerable shipping space the demands on which could be greatly reduced by the use of local foodstuffs.

In the United Kingdom the use of oats and other grain for horses has been forbidden by a Proclamation of His Majesty the King. With the shortage of wheat, oats are required for human food.

Apart from such general considerations the increased cost, due to the war, forces all to give attention to economy. Oats which in 1913 were \$1.85 per 100 lb. are now \$4.00, (March, 1918) bran is now \$3.00 per 100 lb. in place of \$1.65; imported oil meal \$4.00 per 100 lb. as against \$2.34. To maintain the health and working efficiency of our stock at a reasonable cost it is thus absolutely necessary to see whether greater use cannot be made of local resources and particularly of materials which the stock owner can produce for himself. One line of economy is to use corn on the cob by grinding unshelled corn and supplementing it by admixture of locally grown beans and peas.

Mr. Claude Connell of Esperanza Estate has for some years practised this with success. He grinds in a power mill approximately equal parts of corn on cob and locally grown beans and peas and uses five parts of this mixture with one of imported stock feed.

For five months past the four animals at St. Clair Experiment Station have also been fed with a mixed feed in which the proportion of oats has been gradually reduced as they become accustomed to the new mixture. The corn and cob are both ground together the chief object in combining the two being that the crushing of the grain makes it more readily digestible and the cob gives the needed bulk and practically takes the place of bran which it resembles in composition.

Advantage is taken of odd labour during showery weather for the grinding which on a small scale for a few animals is effectively done by means of a small \$10 hand mill bought locally. A power mill is expected to be soon in operation at the Government Farm, St. Joseph.

The first alteration made in the feed at St. Clair was to substitute 200 lb. of corn on the cob for half the quantity of oats (160 lb.) and one-third the quantity of bran (50 lb.). Two months later the imported foods were still further reduced to 80 lb. of oats and 25 lb. of bran by the use of another 100 lb. of corn on cob. The mixture now used is half bag of oats (80 lb.), three-quarter bag of bran (75 lb.) to three barrels of corn (300 lb.)

The average saving by using this mixture has been \$7.45 per month on the feed of four animals, allowing for the market value of the corn although it was actually grown at the Station.

The animals are to all appearance as healthy and efficient as when oats was the principle food, and the Government Veterinary Surgeon says that the supply of oats can be entirely dispensed with without injury. This will be done next month.

At the Government Farm, Tobago, Mr. Meaden has been experimenting with stockfeed made of 1 part of corn, 3 of cob and 1 of sword bean and also in other proportions.

The use of corn on the cob is not a new idea. It is well known and practised in other countries. We have been backward in making greater use of it and the necessities of the war may well result in our adopting better methods which we shall continue to follow in times of peace.

TO STORE CORN, BLACK EYE PEAS, Etc.

Thoroughly dry in the sun or otherwise, and be sure that there are no weevils present. Place in clean, well dried receptacles such as demijohns, petrol drums, kerosine oil tins, casks, etc., and *seal up*. Examine *monthly* and if weevils are found place a little ant poison (carbon bisulphide) on a piece of cloth, or in a shallow tin or saucer, on the top of the corn or peas. Close up the vessel for at least twenty-four hours and then air the contents for a short time if the seed is to be used for sowing; if not the vessel need not be opened.

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